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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/679,085	HERRE ET AL.	
	Examiner	Art Unit	
	Paras Shah	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5,8-25 and 27-29* is/are rejected.

7)☒ Claim(s) *4,6,7 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Arguments filed on 12/26/2007. Claims 1–29 remain pending with claims 4, 6, 7, and 26 having allowable subject matter. The Applicants' arguments have been carefully considered, but they are not persuasive and do not place the claims in condition for allowance. Accordingly, this action has been made FINAL.

2. All previous objections and rejections directed to the Applicant's disclosure and claims not discussed in this Office Action have been withdrawn by the Examiner.

Response to Arguments

3. Applicant's arguments, see pages 2-15, filed on 12/26/2007, with respect to the rejection(s) of claim(s) 1, 21, 22, 27, 28, and 29 under Herre *et al.* (US 5,701,346) have been fully considered but they are not persuasive.

As to the independent claims 1, 21, 22, and 27-29, the Applicants have argued that the limitation "when weighted using the channel side information, results in an approximation of the selected original channel" is not taught in the cited reference by Herre *et al.* (US 5,701,346). Specifically, the Applicant's argue that Herre *et al.* does not do any weighting based on the channel side information but rather uses the constants kl and kr as neutralization factors for the decoding process. The Examiner traverses these arguments. First of all, it should be noted that the present claims in the application do not specify what the channel side information is as limitations from the specification are not read into the claims but read in light of the specification. From this argument,

reciting col. 6, lines 28-50 and col. 4, lines 55-60. The former cited section describes the use of correction factors that are being transmitted as side information to the decoder. These correction factors are multiplied with the compatible or downmix channels. In response to the second portion of the claim, where the weighted channel leads to an approximation of the selected channels, the use of the correction factors as in the Herre *et al.* reference also meet the claimed invention. The correction factors kl and kr are used to preserve energy of the compatible channels or downmix channels as it goes from encoder to decoder. Furthermore, these downmix channels L_c and R_c are user to reconstruct the L_s and R_s surround channel, which were interpreted to be the selected channels. Preserving the energy from the propagation of the encoder to the decoder plays a part in the reconstruction of the original channels (see col. 7, lines 3-21). Furthermore, the use of no correction factors at the encoder or decoder would result in a different end result as the energy is not preserved. Although the correction factors are neutralized once passing in the decoder, the reconstruction of the selected channels occur through preservation of the energy of the downmix channels.

In response to the comments on page 12, last paragraph, regarding the scaled version created by intensity stereo coding, the respective statement has been withdrawn. It should be noted that some citations were changed and clarified. However, no new rejections were created. All respective rejections are maintained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 8, 11, 16, 19, 21, 22, 24 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Herre *et al.* (US 5,701,346).

As to claims 1, 8, 21, and 28 Herre *et al.* discloses an apparatus for processing a multi-channel audio signal, the multi-channel audio signal having at least three original channels, comprising:

means for providing a first downmix channel and a second downmix channel (see Figure 3A, $L_{c'}$ and $R_{c'}$) (e.g. Applicant refers to the same notation as downmix channels, respectively (see Applicant's Specification Page 25, line 14)), the first and the second downmix channels being derived from the original channels (see Figure 3A, L, R, C, L_s, and R_s);

means for calculating channel side information for a selected original channel of the original signals (see Figure 3A, L, C, R, Ls, or Rs), the means for calculating being operative to calculate the channel side information (see col. 6, lines 31-50) (e.g. kr and kl are calculated and transmitted as side information). These constants are multiplied to the downmix channels to obtain the surround channels.) such that a downmix channel or a combined downmix channel including the first and the second downmix channel, when weighted using the

channel side information (see col. 6, lined 42-50), results in an approximation of the selected original channel (see col. 6, lines 51-60 and col. 2, lines 13-60 and see Figure 3C, output of element 9) (e.g. The correction factors used for energy preservation.); and

means for generating output data (see Figure 3C, output of element 6) (e.g. The output of element 6), the output data including the channel side information (e.g. Since the channel side information is determined from element 1 and 4 using intensity stereo coding, the synthesis of the output signal is inherent since the information is used to create the downmixed channels and then regain the surround channels).

As to claim 8, Herre *et al.* discloses the use of a linear weighted combination for calculating the downmix channels (see col. 5, equation 2)

As to claim 2, Herre *et al.* discloses in which the means for generating is operative

to generate the output data such that the output data additionally include the first downmix channel or a signal derived from the first downmix channel and the second downmix channel or a signal derived from the second downmix channel (see Figure 3A, elements 5, 2C, 2B, and 5) (e.g. Once the downmixed channels are quantized, the bit stream packer combines the two signals to form the output into the decoder) (see Abstract).

As to claims 3 and 5, Herre *et al.* discloses in which the means for calculating is operative

to determine the channel side information as parametric data (see equation 5, and col. 2, lines 62-64 and col. 7, lines 3-12) (e.g. The energy of the channels are of importance for preserving the energy. Further, the factors kl and kr are used to preserve the energy of the compatible signals., which will be used to regain the surround channels) not including time domain samples or spectral values.

As to claim 11, Herre *et al.* discloses in which

the first downmix channel and the second downmix channel are composite channels being composite of the original channels in varying degrees data (see Figure 3A, element 1 and element 4, "Joint Stereo Coder" and col. 2, lines 13-60, and equation 2) (e.g. The R, Rs, L, Ls, and C are used to calculate the downmix composite channels), wherein the means for calculating is operative, to use, for calculating the channel side information (see Figure 3A, element 1 and element 4, "Joint Stereo Coder" and col. 2, lines 62-64 and equation 5), the downmix channel among both downmix channels, which is stronger influenced by the selected original channel when compared to the other downmix channel (e.g. It is apparent that the use of intensity coding analyzes the energy to keep the strength of the signals when synthesizing into downmix channels (see col. 7, lines 3-6)).

As to claim 16, Herre *et al.* discloses which further comprises

an encoder (see Figure 3A and lines 1-3) for encoding the first downmix channel to obtain the signal derived from the first downmix channel or for encoding the second downmix channel to obtain the signal derived from the second downmix channel (see Figure 3A, $L_{c'}$ and $R_{c'}$) (Figure 3A shows the encoder).

As to claim 19, Herre *et al.* discloses in which the means for calculating is operative

to calculate downmix energy values (see equation 5, denominator squared) for the downmix channel or the combined downmix channel, to calculate an original energy value for the selected original channel, and to calculate a gain factor as the channel side information (see col. 6, lines 30-40, and lines 55-60 and see equation 5), the gain factor being derived from the downmix energy value and the original energy value (see equation 2)(e.g. The value from equation 2 is squared in order to find the energy using the simulated signals and actual signals, which is analogous to the numerator and denominator of equation 5).

As to claims 22, 27, and 29, Herre *et al.* discloses an apparatus for inverse processing of input data (see Figure 3C), the input data including channel side

information, a first downmix channel or a signal derived from the first downmix channel and a second downmix channel or a signal derived from the second downmix channel (see Figure 3C, $L_{c'}$ and $R_{c'}$) (e.g. Applicant refers to the same notation as downmix channels, respectively (see Applicant's Specification Page 25, line 14)), wherein the first downmix channel and the second downmix channel are derived from at least three original channels of a multi-channel audio signal (see equation 2), and wherein the channel side information are calculated such that a downmix channel or a combined downmix channel including the first downmix channel and the second downmix channel, when weighted using the channel side information, results in an approximation of the selected original channel, the apparatus comprising (see col. 6, lines 50-60):

an input data reader for reading the input data to obtain the first downmix channel or a signal derived from the first downmix channel and the second downmix channel or a signal derived from the second downmix channel and the channel side information (Figure 3A and element 1 of Figure 3A,) (e.g. The input data from the original channels are being read. Applicant refers to inverse processing as deriving the surround channels from the downmix channels (see Applicant's Specification page 8 line 32-page 9, line 1)); and

a channel reconstructor for reconstructing the approximation of the selected original channel using the channel side information and the downmix channel or the combined downmix channel to obtain the approximation of the selected original channel (see Figure 3C, output of element 9, and element 9)

(e.g. The downmix channels are used along with the L', R', and C' to determine the surround channels) .

As to claim 24, Herre *et al.* discloses

further comprising a combiner for combining the first downmix channel and the second downmix channel to obtain the combined downmix channel (see Figure 3A, input of element 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 9, 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claims 1, 7, and 22 above, in view of Stoll ("MPEG Audio Layer II: A Generic Coding Standard for Two and Multichannel Sound for DVB, DAB and Computer Multimedia, 09/1995).

As to claim 9, Herre *et al.* discloses the calculation equations for calculating the signals Rc and Lc from the compatibility matrix (see col. 5, equations 2).

However, Herre *et al.* does not specifically disclose the incorporation of a parameter t.

Stoll does disclose the in corporation of an extra parameter α to the compatibility equations (see page 139, right column, lines 3 and 4 (e.g. equations)) (e.g. similar to t, which is multiplied by each channel).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the apparatus for determining linear weights taught by Herre *et al.* with the addition of the variable α taught by Stoll. The motivation to have combined the two references allows the prevention of overload of the downmixed signals by attenuating the signals from the original channels (see Stoll page 140, right column, lines 7-11), which would prevent the signals in the teachings of Herre *et al.* to be of high amplitude.

As to claims 12, 13, and 15, Herre *et al.* does not specifically disclose the output data syntax being used by a low level decoder to obtain a stereo representation of the multi-channel audio signal.

Stoll does disclose the use of output data syntax by a decoder (see Figure 1, elements ISO11172-3 and ISO 13818-3) which can be used as a two channel decoder which does not use ancillary data and a decoder with multi-channel information (see Figure 3) to use the ancillary data (see page 140, left column, 2nd paragraph (under figure) lines 1-6-right column, lines 1-10).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the apparatus for determining linear weights taught by Herre *et al.* with the addition of the data syntax of a decoder

taught by Stoll. The motivation to have combined the two references allows the decoding scheme for multichannel information (see Stoll page 140, left column, last paragraph)

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 13 above, in view of Stoll ("MPEG Audio Layer II: A Generic Coding Standard for Two and Multichannel Sound for DVB, DAB and Computer Multimedia, 09/2005) and further in view of Miller *et al.* (US 6,442,517).

As to claim 14, Herre *et al.* discloses the audio coding syntax being relevant to MPEG-2 standard (see col. 6, lines 60-62). Stoll discloses the use of audio signals for MPEG 1 and MPEG 2 and ancillary data field (see page 140, left column, 2nd paragraph (under figure) lines 1-6).

However, Herre *et al.* and Stoll do not specifically disclose the use of an mp3.

However, mp3 is a common audio encoding scheme, which is well known in the art (see Miller *et al.* col. 2, lines 63-65) (e.g. The Miller *et al.* reference describes an audio encoding method utilizing the mp3 standard). It would have been obvious at the time the invention was made to have incorporated the use of mp3 format and MPEG-2.4 (AAC) advanced audio format. The motivation to include these formats is since these particular formats are common in audio encoding (see Miller *et al.* col. 1, lines 61-65).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 1 above, in view of Theile *et al.* ("MUSICAM-Surround: A Universal Multi-Channel Coding System Compatible with ISO 11172-3", 1992, October 1-4).

As to claim 10, Herre *et al.* does not specifically disclose the downmix channels being externally supplied.

Theile *et al.* does disclose the stereo channels (downmix) being externally supplied (see page 4, 2nd paragraph, lines 1-5 and equations 6 and 7).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the teachings taught by Herre *et al.* with the external downmix channels taught by Theile *et al.* The motivation to have combined the two references involves the compatibility matrix being unavailable (see Theile *et al.*, page 4, 2nd paragraph, line 4), which would prevent the generation of the output signal from the down mix channels as taught by Herre *et al.*

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 16 above, in view of Baumgarte (US PGPub 2004/0181393).

As to claim 17, Herre *et al.* discloses the signals being derived from the original channels being downmixed (e.g. compatible) channels.

However, Herre *et al.* does not specifically disclose the use of a perceptual encoder (see [0025]) for a signal to be encoded into a spectral

representation, quantizing the result and then entropy encoding the quantized representation.

Baumgarte does disclose in which the encoder is a perceptual encoder which includes means for converting a signal to be encoded into a spectral representation (see Abstract), means for quantizing (see Figure 1, element 125) the spectral representation using a psychoacoustic model (see Figure 1, element 110) and means for entropy encoding a quantized spectral representation to obtain an entropy encoded quantized spectral representation (see Figure 1, element 130).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the apparatus for multichannel audio signal processing taught by Herre *et al.* with the conversion of a signal to be encoded taught by Baumgarte. The motivation to have combined the two references involves distinguishing between audio tones and noise (see Baumgarte [0003]) that allows the channels presented by Herre *et al.* to be noiseless and enhanced.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 17 above, in view of Baumgarte (US PGPub 2004/0181393) and further in view of Miller *et al.* (US 6,442,517).

As to claim 18, Herre *et al.* and Baumagarte discloses the audio coding being relevant to MPEG-2 standard (see Herre *et al.*, col. 6, lines 60-62). Baumgarte discloses the use of audio signals.

However, Herre *et al.* and Baumgarte do not specifically disclose the use of mp3 or MPEG-2.4 (AAC) advanced audio format.

However, mp3 is a common audio encoding scheme, which is well known in the art (see Miller *et al.* col. 2, lines 63-65) (e.g. The Miller *et al.* reference describes an audio encoding method utilizing the mp3 standard).

It would have been obvious at the time the invention was made to have incorporated the use of mp3 format and MPEG-2.4 (AAC) advanced audio format. The motivation to include these formats is since these particular formats are common in audio encoding (see Miller *et al.* col. 1, lines 61-65).

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 1 above, in view of Herre *et al.* ("Intensity Stereo Coding", 1994 Feb. 26-Mar 011).

As to claim 20, Herre *et al.* does not specifically disclose the calculation of frequency dependent channel side information parameter for a plurality of frequency bands.

Herre *et al.* ("Intensity Stereo Coding") does disclose the calculation of channel side information parameters from frequency dependent information for plurality of frequency bands (see page 2, 5th paragraph, 6th paragraph and Figure

3) (e.g. It should be noted that the spectral data is multiplied by the scaling parameter (which is the channel side information) to preserve the energy envelope, in which the energy varies for each frequency band).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the teachings taught by Herre *et al.* with the calculation of frequency dependent channel side information as taught by Herre *et al.* ("Intensity Stereo Coding"). The motivation to have combined the two references involves maintaining the energy-envelope of the original audio channels and human perception of dominant spatial cues (see Herre *et al.* ("Intensity Stereo Coding"), 5th paragraph, lines 4-7) to maintain the signal perception of the frequency bands from the channels presented by Herre *et al.*

13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* as applied to claim 22 above, in view of Brandenburg *et al.* (US 5,0440,217).

As to claim 23, Herre *et al.* discloses a decoder (see Figure 3C and col. 6, line 49-50) for decoding the signal derived from the first downmix channel to obtain the decoded version of the first downmix channel and for decoding the signal derived from the second downmix channel to obtain a decoded version of the second downmix channel (see Figure 3A, output of element 3 and Figure 3C, input to element 6) (e.g. The output of 3 consists of the downmix channels, which have been found from the outputs of 2C and 2B).

However, Herre *et al.* does not specifically disclose the use of a perceptual decoder for decoding the downmix channels.

Brandenburg *et al.* does disclose the use of a perceptual decoder (see Figure 1, element 14 and Figure 3) for decoding audio input.

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the decoder along with the downmix channels taught by Herre *et al.* with the perceptual decoder taught by Brandenburg *et al.* The motivation to have combined the two references involve lowering the bit rates and to recreate the audio signal with little or no distortion (see Brandenburg *et al.* col. 1, lines 68-col. 2, lines 1-4 and col. 5, lines 18-22) to enhance the downmix channels when decoding as presented by Herre *et al.*

14. Claim 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herre *et al.* (Third embodiment) as applied to claims 1 and 22 above, and further in view of Herre *et al.* (First Embodiment).

As to claim 25, Herre *et al.* discloses

in which the original audio signal includes a left channel, a left surround channel, a right channel, a right surround channel and center channel channels (see Figure 3A, L, R, C, L_s, and R_s),

wherein the first downmix channel and the second downmix channel are a left downmix channel and a right downmix channel (see Figure 3A, $L_{c'}$ and $R_{c'}$), respectively, and

to reconstruct an approximation for the left surround channel (see Figure 3C, output of element 9) using channel side information for the left the left downmix channel (see Figure 3C, inputs to element 9, $1/k_l$), and

to reconstruct an approximation for the right surround channel (see Figure 3C, output of element 9) using channel side information for right downmix channel (see Figure 3C, inputs to element 9).

However, Herre *et al.* does not specifically disclose the side information used for three channels and the channel side information being used for the right and left channels.

Herre *et al.* (First Embodiment) does disclose

wherein the input data include channel side information for at least three of the left channel, the left surround channel, the right channel, the right surround channel and the center channel information (see Figure 1A, m, and Figure 1C) (e.g. The channels, L', R', and C' are being multiplied by the side information, which was calculated using the L, R, and C channels (see equation 1),

wherein the channel reconstructor (Figure 3C, output from 7C and 7B and output from 9 (reconstructor)) is operative

to reconstruct an approximation for the left surround channel (see Figure 3C, output of element 9) using channel side information for the left surround channel (see Figure 1C, inputs to element 9), and

to reconstruct an approximation for the right surround channel (see Figure 3C, output of element 9) using channel side information for the right surround channel (see Figure 1C, inputs to element 9).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have modified the processing of data using channel side information as taught by Herre *et al.* (Third Embodiment) with the use of channel side information for more than two channels as taught by Herre *et al.* (First Embodiment). The motivation to have combined the two references involve the adapting of relevant signal properties with regard to energies preservation by use of side information of the channels (see col. 4, lines 51-59).

Allowable Subject Matter

15. Claims 4, 6, 7 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: No prior art or combination thereof suggest or teach the limitation of using joint stereo coding using a downmix channel ... and using as in input channel the selected original channel ...". Further, the limitation "calculating channel side information for the right or left channel using the left or right downmix channel", respectively as recited in claim 6 is no disclosed in prior art or combination thereof. The limitation of "reconstruct an approximation for the center channel using channel side information for the center

channel and the combined downmix channel" as recited in claims 7 and 26 is not suggested in prior art or combination thereof.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paras Shah whose telephone number is (571)270-1650. The examiner can normally be reached on MON.-THURS. 7:00a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

02/12/2008

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SUPERVISORY PATENT EXAMINER